Tangle of Knots

Kit contains:

- 1 Knot tile template
- 1 Length of rope

You will need: scissors and tape.

*In mathematics, a **knot** is a closed loop – with no loose ends! – that twists and turns through 3-dimensional space.*

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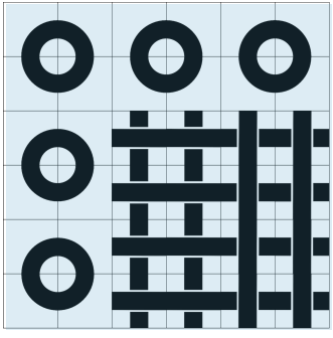
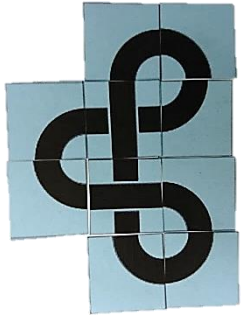
INSTRUCTIONS

Step 1. Cut out the 36 tile pieces.





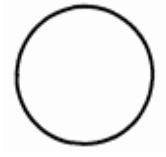
Step 2. Explore mathematical knots!

THE MATH!

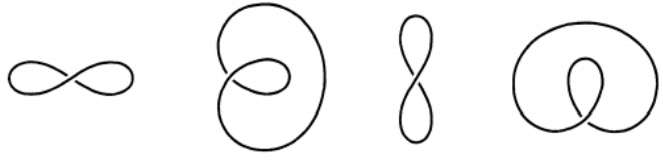
Knot theory, the study of knots, is a branch of topology. **Topology** is like geometry in many ways, except the shapes you study aren't rigid.

Instead, you can twist, stretch, squish, and generally deform them in any way you like, so long as you don't rip any holes or attach things that weren't already attached.

A plain old loop is called the **unknot**.

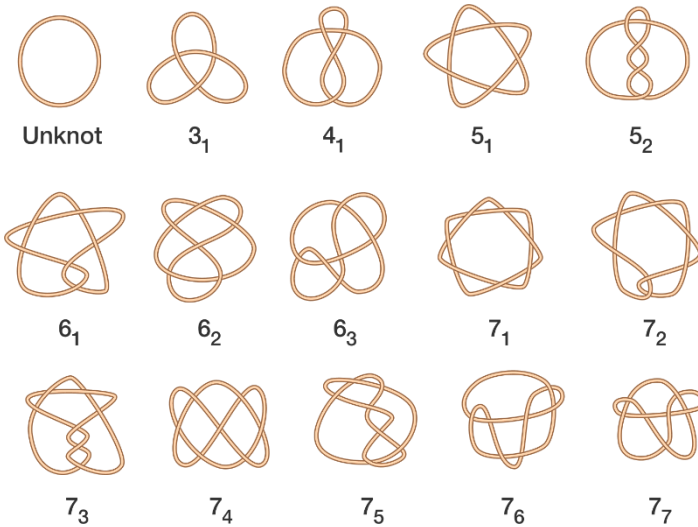


All of these are mathematically the same as the unknot because when you pull them tight, they become the same loop.



Unknots aren't bad, but there are TONS of more interesting knots out there.

Your challenge is to use your tiles to create 2-D models of knots and your rope to create 3-D models. (Tape the rope ends together to close the loop).



(Source: brilliant.org/wiki/knots)